Waterspout Forecasting

- A U.S. Gulf Coast Retrospective and Modern Day Look -

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ABSTRACT

Not to be confused with mesocyclone-induced tornadoes over water, waterspouts frequently occur along the Gulf Coast during mid-summer mornings. These non-supercell phenomena form when the deep-layer vertical wind shear is weak. Their formation is aided by pre-existing vertical vorticity maxima (e.g., existing along a nocturnal land breeze) which become coincident with developing low-level updrafts also initiated by the land-breeze vertical circulation. Waterspouts have also been observed to occur along thunderstorm outflow boundaries and are formed by a similar process. Often called *'76 F dewpoint spouts*,' they occur when the dew point is high. Another requirement for their occurrence is very unstable air which enhances boundary layer updrafts, resulting in vortex stretching. This presentation will provide both a retrospective and modern day view of forecasting waterspouts in a National Weather Service Forecast Office.